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PIKES PEAK RADIO AMATEUR ASSOCIATION, INC.

P.O. Box 16521
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FIRST CLASS MAIL



Ø BEAT



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The Pikes Peak Radio Amateur Association meets on the second Wednesday of each month at Giuseppe's Depot Restaurant at 10 S. Sierra Madre at 7:30 p.m. All amateurs and interested parties are invited to attend.

Editor: Keith Goobie NYØT, 5335 Coneflower Ln., Colorado Springs, CO 80917 637-1525

Review of PK-FAX Software for the PK-232

by Timothy Tonge - KA0MWA

AEA has recently released there new PK-FAX software for use with the PK-232. This software is intended solely for the reception of FAX pictures to your computer screen and printer. Pictures received can be saved, or printed, or discarded. Hardware requirements for the PK-Fax program are:

1. 384 K of memory or more
2. 2 floppy disk drives or 1 floppy disk drive and a hard drive
3. CGA, EGA, or Hercules compatible video graphics adapter and appropriate monitor
4. MS-DOS or PC-DOS Version 2.0 or above
5. RS-232C serial communications port (Com1 or Com2)
6. AEA PK-232 or Heathkit HK-232 data controller with 04.MAR.87 or later firmware
7. A serial cable capable of 4800 baud operation (supplied with PK-232)
8. A receiver capable of receiving fax frequencies.

The software comes complete on 1 360K floppy disk and is not copy protected. The software is intended for IBM and true compatibles. To use the program you should either copy the disk to another floppy or to your hard drive. You then execute PKFAX. Upon executing the program, the main menu will appear. Three options are presented:

1. Configuration;
2. FAX with PK-232; and
3. FAX without PK-232.

The first option, configuration, allows you to set up the software as needed by your particular system. The following items are on the configuration menu;

- A. PK-232 Serial port
- B. Printer type
- C. Printer graphics density
- D. Printer port
- E. Serial printer baud rate
- F. Serial printer parity
- G. Printer data bits
- H. Printer status method
- I. Video graphics adapter (Supports Hercules Monochrome, CGA, and EGA)
- J. Transmit morse ID (For use when sending FAX)
- K. Callsign for morse ID
- L. Next auto-save file
- M. Auto-save start time
- N. Auto-save stop time
- O. Screen Display time-out.

As you can see, most computer systems can be accommodated by the above settings. My system, an IBM AT with an EGA screen and Epson LX-90 printer, worked fine with the default settings that came with the program.

The second option at the main menu allows access to the PK-232 to receive FAX pictures off the air. Once selected, this option takes 15.60 seconds to initialize. Once initialized you are ready to go. The default settings that come with the program allow for reception of normal weather charts and satellite photos as sent by stations like NAM and NMC in San Francisco. The screen dis-

Continued on Page 5

"THE VIEW FROM THE PEAK"

by George Hinds, N8CIX/Ø

ANOTHER "SEARCH AND RESCUE" - NOT ALWAYS A HAPPY ENDING...

In early April the call came once again: Teller County Search and Rescue was enroute to a "missing person" mission in Pike National Forest north of our home and they were asking for amateur radio assistance to handle communications from their mobile command post van.

The missing person was a 40 year old woman; her teen-age son made the report. She had been gone since the evening before, he said, when they had argued. She allegedly had driven away from home; her car was found not far from the house. Her horse was still in the corral. Two guns were reportedly missing, a pistol and a rifle. The conclusion: we would find her exhausted from hours of wandering in the forest, or dead as a result of suicide. Thus began almost three days of searching in rugged mountain and forest country.

The communications van site was on a hilltop overlooking much of the search area. Inside the van, besides all manner of equipment for the searchers, is radio equipment to operate on VHF high band for police and fire, the sheriff, Colorado State Patrol, local government and the search/rescue frequency. In addition, hams working the van install their amateur 2-meter radio (antenna and power cable is permanently installed). A CB radio is also available if needed.

This time the local amateurs helping were Bob, WBØFLU and myself at the site, with Joe, NØCMD and Norm, NØOGR monitoring for traffic from home.

Search and rescue is not repeater-equipped; most personnel have only walkie-talkies. Amateur radio handles point-to-point contacts, relaying traffic over distances and terrain not covered by S&R radios.

After almost two days of fruitless searching, Army helicopter assistance was called in plus a tracking dog.

The sheriff called a temporary halt

after one more helicopter search; we shut down our command post and went home. At this point, it seemed to many that this was neither a suicide nor a walk-away. How true! A few days later, according to news reports, the son led officers to a gulch five miles north of the search area to where the body had been dumped, rolled in a blanket and covered with rocks. The son is now being held; another search and rescue mission was over.

Despite the unhappy ending this time, humor of a sort was to be found during a brief interlude in the search. Smoke bombs set off beside the highway where the helicopter was to land, to show wind direction and speed, ignited the field of grass and brush and then spread. At this point, the fire laddies were summoned. Then, with fire-fighting underway, a huge Army twin-rotor helicopter hovering for a landing, and auto traffic on the adjacent road, the final twist took place: several rear-end collisions caused by drivers watching the fire, fire fighters and helicopter, but not each other!

A DISGUISE ANTENNA TO TOP 'EM ALL?

Up to now, disguise antenna designs have been of the type that imitates the appearance of a car broadcast antenna -- but now comes the ultimate disguise: an antenna that looks like a car!

A manufacturer in California (plenty of odd things start there, I've been told) has developed, according to advertisements, a system that converts the car body into a unity gain antenna for service in the 120 to 175 MHz range. Reportedly, the VSWR is 1/1 tunable to a spread of 4 MHz.

Meanwhile, another manufacturer has come out with a 150 MHz antenna that looks like those used with cellular telephones. It's reportedly intended to fool people who are being "observed" by police into thinking the car is anything but law enforcement at work.

Finally, there is the cellular-type antenna that is not an antenna -- it's designed and sold to people who want the prestige appearance (or snob appeal) of a telephone-equipped car, but who can't afford or don't really want a mobile telephone in their vehicle. 73, George

WHO'S ON FIRST WHAT'S ON 440 UHF FM?

The other day I was listening to one of the local VHF-FM repeaters and happened to hear a visiting ham enquire about activity on 440 UHF-FM in Colorado Springs and the surrounding area. The person with whom he was speaking did not have the information the visitor was seeking and luckily another ham that monitoring came to the rescue. This prompted me to write this article to tell you about UHF, its advantages, its disadvantages, and to outline the repeaters and simplex in current use in the local and surrounding areas.

UHF-FM is slowly growing in this area mainly due to its many advantages. The wavelength is very short (70cm), thus allowing the use of very high gain antenna systems in base and mobile applications. For example in mobile use, a 6 db colinear antenna system is slightly smaller than a 5/8 wave antenna for 2 meters. For the base one can build a 14 element antenna that is about 10 feet long. One of the main reasons that I use UHF is that electrically it is very quiet. There are several areas around the Springs where my VHF system gets swamped by electrical noise. Initially I thought that my receiver was at fault, but was relieved to hear that other people were having the same problem with their receivers as well. Much to my delight there was no noise on UHF frequencies in these same areas. As compared to 2 meters which has only 4 Megs of bandwidth, 440 has 10 Megs dedicated to the FM portion alone! Finally UHF tends to bounce off buildings very nicely and you can often communicate in areas that 2 meters will not work.

You cannot have some of the good without having some of the bad! UHF is a line of sight mode of operation and sometimes going behind a hill can wipe out your communications. Depending on the area, it is sometimes more prone to intermod as well. In most cases UHF-FM rigs are more expensive than 2 meter equipment and are sometimes harder to come by than 2 meter equipment. But those of you who like strong signal levels, you will be disappointed. But fear not, you will overcome this very quickly and can expect to have armchair (bucket seat!) QSO's when the signal level may only be an S-1.

So what is in the local area? Here is a list of the local and surrounding machines and some of their features:

446.000 - This is the UHF simplex frequency equivalent to 146.520 Mhz

446.200 - Code practice from the Pueblo Ham Club

446.800 - Packet frequency

447.150 - WA1JHK - A repeater serving the Denver and surrounding area. Located on Conifer Mtn.

447.175 - WOES - Pueblo repeater that is linked with 146.880 Mhz

447.350 - WA0CYM - Local repeater serving the Colorado Springs area

447.950 - WOES - Pueblo repeater that is sometimes linked with 146.790 Mhz

448.000 - NOCAM - Located on Cheyenne Mountain. Being upgraded to have new controller and autopatch. Very good coverage. Sometimes requires PL tone

448.250 - NOKG - Located on Cheyenne Mountain. Very good coverage. Requires PL tone

448.300 - NOHDV - Local machine. Sometimes linked to 147.135 Mhz

448.450 - W0VI - Located on top of Pikes Peak (not to be mentioned). Probably the largest area coverage machine in the state. Can be linked to 146.970 Mhz and has many excellent features

448.600 - WOMOG - Local coverage machine that can be linked to 29.6 Mhz FM. Some interesting DX at times

448.650 - A new machine that will be put up by the Woodlawn Park group (MARC)

449.350 - Denver machine. Callsign not known

449.700 - Denver machine with good coverage. Features remotely programmable link on 2m and autopatch. Callsign not known

449.900 - WA0KXO - Located on Cheyenne Mountain. Linked with 147.03 Mhz. Features remote link and autopatch. Requires PL tone

Well, that is it! If you have any questions regarding activity ask myself or get on one of the above mentioned repeaters.

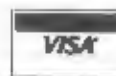
PK 232 FAX (FROM PAGE 2)

play is in black and white, and has a status line at the bottom. This status line displays your current settings at a glance. Also, F1 is a help key that will give a brief reminder with a pop-up menu as to what each key does. Assuming you have tuned a FAX station (recommended 1.7 KHz below the actual transmission in USB), and your settings are correct, the FAX picture will begin to fill the screen and the buffer one line at a time. A normal weather chart takes about 15 minutes to receive, and will take about two screens. Upon receipt of the picture, you then have several options. You can, of course, continue to view the picture on the screen. Several options are available here as well. First, you can page up and down to view the picture. Secondly, you can compress the picture so that it shows entirely on one screen. Or thirdly you can zoom in on one portion of the picture so that it is 4X larger than the normal screen. If your picture was not aligned correctly, you can justify the edge with one key stroke. This is very nice as many times you will miss the sync tones at the beginning of the transmission, and the picture is not aligned properly. Once you have finished viewing the picture, you can print it, or you can save it to disk (you can do both if you want). Once saved, the picture can be retrieved again for further viewing if desired. You can also transmit stored FAX images, or images you have created through programs like PC paintbrush. I have not transmitted any pictures so I can't comment on that portion of the program.

One very nice feature of the program is that it is not necessary to unhook your printer from the computer and hook it to the PK-232. This software routes the FAX pictures through your normal printer set-up, a very nice feature indeed. The third option at the main menu allows the retrieval and viewing or printing of previously saved pictures. This is a way to show off pictures to your friends when you do not wish to spend 15 minutes waiting for an image to arrive.

One utility program is also included. In this program, called Frame, you can manipulate received pictures in a variety of ways. First, you can turn your received pictures 1/4, 1/2, and 3/4 turns from the received image. You can also reverse the image, as in a mirror. You can also change the colors as in a negative. Several other features are available as well. Unfortunately, this does not occur while the picture is on the screen. To use Frame, you must first exit the PKFAX

Continued on Page 7



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YAC NET NEWS.....

The Young Amateurs of Colorado held their first net in October, 1987 with 9 check-ins. To date they have identified 35 young amateurs up and down the Eastern Slope many of whom have been licensed since that time, and they are still successfully recruiting new candidates. Some of them are so new their calls are still not available.

The purpose of the net is helping young and newly licensed amateurs to become familiar with net operating procedures. The net was first hosted by KB6LSX-Becky (15). She specified two requirements on the net: the control operator (a weekly rotating position) must be under age 21; and all who check in must be "young at heart." Their net is held weekly on Monday evenings at 8:00.

Because the members are so spread out across the state (Boulder, Salida, Pueblo, Colorado Springs, and Greater metropolitan Denver) many of them have rare occasion to meet face-to-face, so activities are planned in hopes that some of the more distant members may meet the rest. One of their first activities was hosted by WDOE-Ian White, along with his 15 year-old son, NOISE-Tim, who demonstrated how to participate in a T-hunt.

Another trip in which 26 members, parents and drivers attended was a trip to ETO-Ehrhorn Technical Operations in Canyon City where the Big Gun 87 amplifier is manufactured. There they toured their engineering/planning lab where future bigger and better amplifiers and projects are planned, through the plant where they were in the process of assembling the product, and into the Quality Assurance Lab where the final check-out is performed on the finished product. NJOG, Ray, was a most gracious host, along with NOHAY, Mark. Ray said he had never seen such a large group of young amateurs together, and to see him if anyone with a ticket wanted a job!!

Future plans of the group include a trip to the Bureau of Standards (WWV) in Boulder, the Penrose rocket plant, and NORAD. KA0ZWV-Eddie (fondly referred to as "Zapped With Voltage") is net director for a 10-meter net that started in February, and is held every Saturday afternoon 2000 hrs UCT, (1300 MDT) on 28.460

mhz and is an attempt to extend the teen ham contacts beyond Colorado.

KB6LSX, KB6IGE, KA0WWB and KA0WUC are active on packet and all enjoy ROM hopping across the country to visit with other hams. KB6LSX and KB6IGE can be reached on their home BBS, WA6ERB, Lakewood, Colorado, while KA0WWB and KA0WUC can be reached on WB0BLV, Colorado Springs, and are eager to meet other teens who also like Digipeating and ROM-hopping. NOIFT recently joined them, and KA0VGL will be joining them very shortly.

Although the net is popular with many Hams in the Denver area, Young Amateurs who check in regularly on the YAC-Net include:

KB6LSX-Becky	(15)] Malm	* P
KB6IGE-Mike	(17)	} "	* P
KA0ZKZ-Ken	(20)] "	*
KB0AMB-Livingston	(12)		*
KB0BEU-Mindy	(12)		*
KB0BDM-Scott	(13)		*
KB0BCT-Nickie	(15)		*
KB0BEV-Spencer	(11)		*
NOIFT-Mike	(16)		
KA0WUC-Kit	(16)		* P
KA0ZWV-Eddie	(16)		*
KA0VGL-Mike	(15)		*
NOIPB-Kate	(10)	} Stenger	*
NOIPE-Chris	(15)] "	*
KA0WWB-Evan	(15)		* P
KA0NND-Keith	(12)		*
NOISE-Tim	(15)		*
KA0QYA-Jeff	(19)		*
KB0BDC-Colby	(14)		*
KB0AHB-Richard	(13)		*
KD0TS-Craig	(17)		
KB0AZQ-Wade	(9)		*
KA0VCQ-Alex	(18)		
KA0YPK-Frank	(15)		
KB0BGA-Dan	(15)		
KB0BNJ-Jennifer	(11)		*
KB0BNK-Amber	(10)		
KB0BNL-Roxanne	(11)		
KB0BRV-Chris	(13)		
KB0BLI-Brett	(9)		*
KB0BWI-Carelyn	(11)		*
KA0ZBZ-Allen	(18)		

and Matt (waiting for his call to come in the mail)

* Both parents are hams.
 * Father is also a ham.
 P Active packeteers

Becky Malm - KB6LSX

Air Force Academy Amateur Radio Club

The AFA AMATEUR RADIO CLUB met Wed April 13, 1988 at 1200 in Arnold Hall. This was the second meeting of this club. An election was held with following results:

PRESIDENT DOUG NOHJT
VICE PRESIDENT AND TREASURER JIM WA9ABB
SEC. AL NOCMW
BOARD RON NK0F
BOARD TED NO1QQ

This club meets the 2nd Wed of each month on the Air Force Academy during noon hour. This club is open to all civilian amateurs working on the academy, also to all military and retired military amateurs. This club will host the Pikes Peak Radio Amateur Assc. for Field Day, the last weekend in June and for a picnic on August 28. Both will be at picnic ground 3. The next meeting will noon May 11, at Arnold Hall.

• PK-FAX (FROM PAGE 5)

program and then execute Frame. One good feature however, is that Frame can be executed through the PK-FAX DOS shell.

All in all the PC-FAX program is a nice program to use with the PK-232. However, compared to the PC-Packrat program, this program is not quite as nice. First, you cannot select the screen colors you want. For me, I like to have a blue background and white detail. Second, the Help command is not near as detailed as in the PC-Packrat program. And lastly, the PC-Packrat program had a very professional feel to it, and the PC-FAX does not. Of course, these complaints are fairly minor and

the cost of the program is not high.

DITS & BITS

FOR SALE

CMDR 64, 1525 Printer, 1541 Disk Drive, Magnavox Green Monitor, 300 Baud Modem for CMDR 64. Package Deal for \$300.00. Contact Al Vrooman NOCMW 473-1660.

FOR SALE

Heathkit HD4040 Packet TNC. Has original Heath Software or updated W4DED software (your choice). \$100.00 Contact Dick Thompson (WB0DUL) 576-0232 or Nick Hulbert (KG5N) 593-8603.

FOR SALE

Owner selling equipment as he has moved into an area that has restrictive covenants against antennas. Items include:

Kenwood TS830S Transceiver
Kenwood AT230 Antenna Tuner
Kenwood VFO 230
Kenwood SP230 Speaker
Kenwood MC50 Mike and Stand
Katsumi Keyer (squeezer)
3 Band Beam Antenna for 10-15-20
Rotor and Control
Vertical, Swan Trap 10-15-20-40
Heath Dummy Load
All manuals for the above equipment
4 years of QST's
Please call Mac (KA6NNI) at 548-8015

PPRAA PICNIC PRIZE

This year the prize for the club picnic to be held at the Air Force Academy will be a 220 MHZ HT. Tickets will be available from Keith NY0T during the Saturday morning breakfast or at any club meeting. Tickets will cost a dollar each (\$1.00)

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ANTENNA SYSTEMS

"THE TUNER"

For the past couple of months, I have talked of several Antenna systems and how to put them together. Last month I told you we would talk about antenna tuners. There are several types and I will mention them and their use. I will also discuss, what I believe is the ultimate tuner.

Types of tuners: The auto tuner: These have become very popular in the past few years and are now incorporated in some radio units. They use a simple system of applying a small amount of RF energy to the antenna and while doing so measure the voltage difference, of forward and reverse voltage. This is then applied to motor system, which in turn drives a variable capacitor or inductor. As the motor tunes, the voltage is checked for minimum reflected and maximum forward, when achieved the motors stop and the circuit, is in resonance; or as close as the system can come. The tuner then signals it's completion by turning off a light, or turning on a light or in some cases a meter indication may be used. These systems are expensive and range in the \$350.00 to the \$500.00 dollar range. Most of the antennas used with these systems, require some presenting to a length of near lowest frequency obtainable and a capacitor is used to shorted the system electrically.

Mechanical tuners: The simplest of these is a capacitor type. This system is inserted in series with the feed line and a random length of wire or a vertical, is set longer than needed. The capacitor is then used to electrically shorten the antenna. Capacitors are usually 250 to 350 pfd. For greater lengths other capacitors of fixed value, usually of the door knob type, can be added in parallel with the variable for greater frequency range. The value of these fixed capacitors are usually in the 500 pfd range.

Another type is a simple inductor type. These inductors can be of the fixed value, using a simple alligator clip to input, to pick off the most desired value, for short antennas, usually about 20 to 25 feet in length, so as to achieve frequencies in the 40 to 160 meter range. The value of the inductor is usually in the 30 to 50 uh range. Some of these have a roller inductor which makes range selection quite easy. Add to this a counter and soon you can achieve a series of

known points to preset to for given frequencies.

Still another type is the LC system. This is the combination of an inductor and a variable capacitor. this allows you the opportunity, to work on a greater range of antennas, long or short, with good success.

Now if you add to this a bridge system for reading reflected energy you are really in the pink. However most of these system do not have any metering, so some type must be provided. A great many of them are of low power range 100 to 300 watt type. This too is limiting. So what of the guy who really wants to get with the program, say he runs two thousand watts has a couple of antennas up for various reasons and would like to have the ability to see what goes on while tuning this system. In other words any thing thrown out the window at any power, can be loaded up. Well this type does exist and there are a lot of options. The price range of one in particular is from \$265.00 in a kit to \$400.00 plus, built for you.



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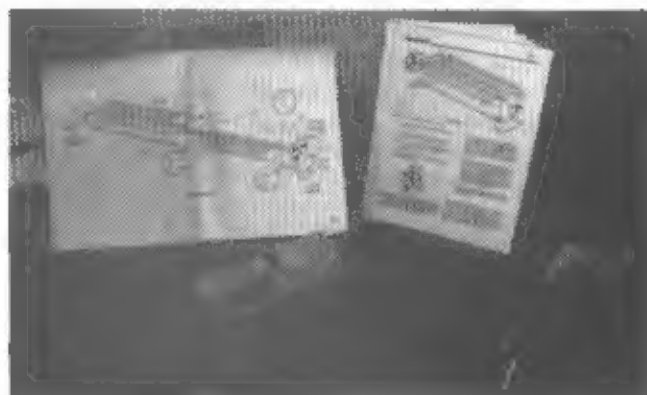
The one I refer to in particular is the Heathkit 2060A. This is a great antenna tuner. Some of the features I think are most professional. First of all, the box is copper clad. It has a forward and reflected reading metering system. It uses the ultimate for tuning, a "T" type system. It has both balanced and single wire feed as well as two coaxial inputs. Plus a 4:1 Balun. It is rated at 2,000 watts, peak. It seems to be ideal for those who run solid state rigs. It appears to have a range of 20 to 400 ohms impedance matching capabilities. If you buy the Heathkit, it takes about 20 hours to assemble. If you prefer to buy this system and pay to get the same thing, then look to Amp supply and for \$449.00, they will sell you the same thing, only you get to pay some one about \$10.00 an hour to do your work for you. The choice is up to you.

I elected to do my own thing, about four years ago. The fruits of my labor can be seen in the attached photos. The assembly does require some skill. For example, the capacitors do have to be put together. They do not come assembled. The inductor is wound but, you will have to mount it in a cradle. The balun has to be put together, it requires patience. Last but not least, is a good tool set. The results can be quite astounding. If there was just a little iron in noodles, I think this tuner could load up a wet one. The photos tell the story, some what better than I.

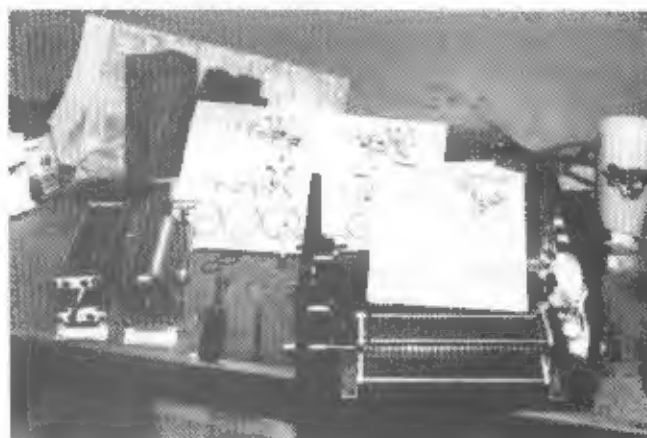
73 Paul KD0SO



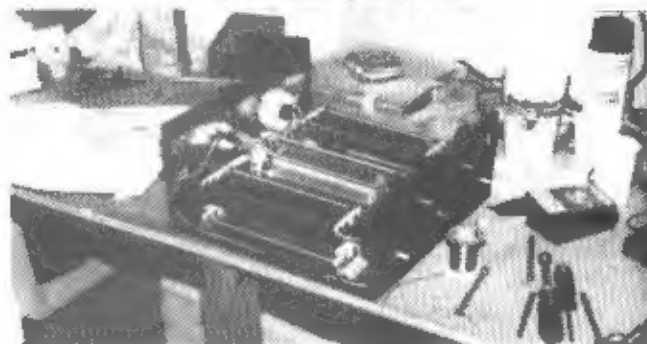
It begins, checking parts first



Putting the capacitors together



Major parts assembled -
Begin bolting them in



Unit complete, add knobs
cover and place in service

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MINUTES OF FEBRUARY GENERAL MEETING

submitted by Al NOCMW, secretary

The general meeting of the Pikes Peak Radio Amateur Association was held at Giuseppe's Old Depot Restaurant, Wednesday evening 13 March 1988. The meeting was called to order by the president Ron NK0P at 19:30. There were approximately 56 members and guests present.

The minutes of the previous General Meeting and Board meeting were approved as printed in O-Beat.

Committee Reports

Note: Anyone wishing to help out on any of these committees, please contact the chairman at the phone number listed. Thank you for your support.

Treasurer - Bud N0DDF (599-7699)

Previous balance was \$1720.61, income of \$652.54, expenses of \$968.74 leaving a balance \$1404.41.

Interference - Ron NK0P (593-8352)

One case of interference was reported and it was solved. There were no further details.

Education - Harley KC0TO (634-4555)

There were around 27 to 29 people who have enrolled in the new Novice classes ranging in age from 11 to 65.

Publicity - Karen N1FED (495-0095)

NIL

Colorado Council of Amateur Radio Clubs (CCARC) - Oak K0ROL (591-1426)

NIL

Deaf and Blind School - Jim WA9ABB

(598-7543). Everything is going fine, but some antenna work will have to be completed soon.

O-Beat - Keith NY0T (637-1525)

Keith was out with the flu.

ARES - Al NOCMW (473-1660)

ARES meets every Wednesday night except for Club meeting nights on the 37/97 repeater at 1900 local. Would like to see more participation.

Public Service - Mike K0TER (636-1290)

Mike expressed his thanks to all the volunteers who helped in the Walk for Mankind. He indicated that volunteers would be needed for the March of Dimes Walk for America (May 15 0730 till 1700), the Black Forest Volksmarch (May 28) and the Tripoli Rock-et Society (Aug 6 & 7) for Liaison with the FAA.

VE Testing - Irene AH6GF (389-0730)

VE Testing will be Saturday 07 May 88 at the First United Methodist Church on Nevada and St. Vrain.

SWAPFEST - Les KC0NC (634-3995)

The Grand Prize will be a Kenwood TS140S purchased from CW Electronics. Bill WB2EVR and Elinor KB2BAJ are now in charge of the raffle ticket sales. Flea Market tables may be procured from Al NOCMW or Frances N0IUT 473-1660. They are \$8.00 in advance, \$10.00 at the door.

Teller Hill - Doc W0MCT (596-4216)

This year it will be held on Sat and Sun, the 11th and 12th of June respectively. On Sept 24th and 25th, the Divide / Cripple Creek race will need volunteers as well.

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TAB BOOKS

Old Business:

Nil

New Business:

Max KDOEL will head up the Field Day effort again this year. It will be held in the last weekend of June. Les KCONC has volunteered to set up the phone station. Jim WA9ABB and Jake NOCYR will set up the Novice station. Al NoCMW will set up the VHF station and Lucy Stansberry has volunteered to head up the breakfast committee.

Ron NKOP read a letter from Ron Morris KA0ZHO who stated that he was tendering his resignation due to workload commitments. Thanks Ron for the all help you have provided the Club.

Malcolm KE9S stated that the Pikes Peak Hill Climb will need a minimum of 40 people to operate it (including 1 chairman and 5 committee members) for Sunday July 5th. A motion was made to help the hill climb as a safety crew, but after a long discussion, it was rejected unanimously.

A motion was made to have the 4 non-officer board members act as the program committee. This was tabled as a bylaws motion and after it has been published, it will be voted upon at the next club meeting.

At the next general meeting there will be an election to fill in the Board member slot left vacant by the resignation of Ron KA0ZHO.

A motion was made and seconded to have the club officially sponsor the VE Exams. After discussion, this was passed.

Prizes - Keith NYOT:

Winners were:

KB0QI	Faye	-	Used 300 Baud Modem
NOAMP	Larry	-	International Callbook
KB7WY	Steve	-	Pocket Multimeter
KOROL	Oak	-	Advanced Manual
WD0BSZ	Don	-	Old Keyer

Program:

The program had to be canceled at the last due to business conflict.

The meeting was adjourned at 2130.

The next meeting will be 11 May 88.

MINUTES OF APRIL BOARD MEETING

submitted by Al NOCMW

The board meeting was held on Monday 18 Apr 88 at the home of Bud NODDF. Meeting was opened by President Ron NKOP at 1900 hrs. Present were Bud NODDF, Keith NYOT, Al NOCMW, Chris NXOE, Nick KG5N, Les KCONC and Ron NKOP.

Doug NOHJT and Max KDOEL have been nominated for the Board position left vacant by the resignation of Ron KA0ZHO. This will be for the term expiring in October.

Nick KG5N will not be available to serve on the Board for the next three months due to business commitments. His position will be held until his return.

The Board authorized another \$100.00 for the D&B for the purchase of a dipole antenna.

The Board authorized Keith NYOT, the editor of O-Beat, to buy a camera for the taking of pictures for the O-Beat newsletter at a cost not to exceed \$150.00.

The Board authorized the sum of \$75.00 for improvements to the Club trailer. It will be used to improve the electrical wiring and fixing a gas leak. The Board would like to express their thanks to Cliff Upton WOLME for his donation of a new battery to the Club trailer.

It was brought to the Club's attention that CW Electronics has absorbed a two time increase in the cost of the raffle prize. This was imposed by Kenwood on the original quoted price of the TS140S. The Board would like to thank them for their support of the club.

There being no further business, the Board adjourned at 2100 hrs.

MAY MEETING

The next regularly scheduled meeting of the Pikes Peak Radio Amateur Association will be held on Wednesday, 11 May 88, at 7:30 PM at Giuseppe's Depot at #10 Sierra Street. Mr Mark Forbes KC9C from ETO will be the guest speaker. He will talk about his companies linear amplifier products and his trip to the Dayton Hamvention as a representative of his company.

MILEY'S RADIO

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New Area Code Effective 3/1/88 (719) 784-3040

Hamfest Schedule for 1988 as of February 1:

Will not be home from April 20 to May 4
May 21 Colorado Springs
June 10—June 11 Superfest, Loveland, CO
Friday Noon—9 P.M., All day Saturday, No Sunday Swapfest
No Hamfests Scheduled June 4, 18 or 25 —
But expect Grand Junction and Loveland, TX
to choose two of those dates.
July 2—July 4 None Scheduled
July 9—July 10 Laramie, WY
July 16—July 17 East Glacier, MT
July 22—July 24 Woodland Park, CO
July 30—July 31 Nothing Scheduled Yet
August 6—August 7 W.I.M.U.—Jackson Hole, WY??
August 13—August 14 Probably Amarillo, TX
August 20—August 21 None Scheduled
August 27—August 28 None Scheduled
September 3—September 4 Alamogordo, NM
September 9—September 11 Campout Hamfest Laramie, WY
or National Convention in Portland, OR
September 16—September 18 Wichita Falls, TX (Tentative)
September 23—September 25 Santa Fe, NM
October 1—October 2 Lubbock, TX
October 8—October 9 Lubbock, TX
October 15—October 16 Nothing Scheduled
October 22—October 23 Nothing Scheduled
October 29—October 30 Nothing Scheduled
November 5—November 6 Odessa, TX
December 3—December 4 Apache Junction, AZ (Tentative)

Will get your phone messages by remote and call you that evening or next morning. Please leave both day and evening phone numbers on our machine.

Not running a list of new equipment this month because of probable price increases on imports. We have most new equipment in stock or will ship it to you direct. If you're looking for a certain rig — put a message on our machine and we'll try to find it for you.

73's — Jess

5/88

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Associate Member \$8.00 ☐ (Outside Teller & El Paso Counties.)